

Are Yellow-throated Seedeater *Crithagra flavigula* and White-throated Seedeater *C. xanthopygia* conspecific?

Observations of seedeaters from Djibouti

Michael S. L. Mills and Callan Cohen

Le Serin à gorge jaune *Crithagra flavigula* et le Serin à croupion jaune *C. xanthopygia* sont-ils conspécifiques? Observations concernant des serins de Djibouti. Des serins *Crithagra* sp. observés dans la Forêt du Day, Djibouti, en juin 2010, étaient identifiés initialement comme des Serins à gorge jaune *C. flavigula*. Les variations dans le plumage de cette espèce et du Serin à croupion jaune *C. xanthopygia* et les ressemblances de plumage et des vocalisations entre le Serin à gorge jaune et le Serin à croupion jaune ont cependant jeté le doute sur leur identité, et remettent en question la validité de ces deux espèces, dont un examen approfondi pourrait révéler la conspécificité. Auparavant, le Serin de Reichenow *C. reichenowi* était le seul *Crithagra* sp. rapporté de Djibouti, mais cette espèce devrait maintenant être confirmée. Quelle que soit l'identité des serins de la Forêt du Day, ils représentent une nouvelle espèce pour Djibouti.

Summary. Seedeaters *Crithagra* sp. observed at Forêt du Day, Djibouti, in June 2010, were initially identified as Yellow-throated Seedeater *C. flavigula*. However, plumage variation within and plumage and vocal similarities between Yellow-throated Seedeater and White-throated Seedeater *C. xanthopygia* have cast doubt on their identity, and call into question the validity of these two species, which further study may reveal to be conspecific. Previously, Reichenow's Seedeater *C. reichenowi* was the only *Crithagra* sp. reported from Djibouti, but that species should now be regarded as requiring confirmation and whatever the identity of the seedeaters at Forêt du Day, they represent a new species for Djibouti.

In the late afternoon of 1 June 2010, we were observing birds on the western edge of Forêt du Day, Djibouti, at 11°46'14"N 42°39'07"E (1,465 m), c.1.5 km south-east of Day village (11°47'N 42°38'E). The habitat was open juniper forest with a grassy understorey, and shrubby juniper forest on steep slopes. Several seedeaters *Crithagra* sp. (previously placed in the genus *Serinus*) were heard singing from atop *Juniperus procera* trees and were initially observed at >50 m. Based on their yellow rumps they were assumed to be Reichenow's Seedeater *C. reichenowi*, the only species of *Crithagra* previously reported from the area (Welch & Welch 1984). However, closer inspection revealed that they had white chins, throats with a very faint yellow wash, and lacked the dark streaking over the breast characteristic of Reichenow's Seedeater (Fig. 1). The birds also had relatively plain upperparts, a greyish wash to the upper breast, and a yellow rump that extended to the uppertail-coverts and was thus more extensive than in Reichenow's Seedeater (Figs. 2–3). These features suggested their identity to be Yellow-throated Seedeater *C. flavigula* (Atkins & Harvey 1996, Redman *et al.* 2009), which was our initial identification.

During the next two hours and on the following morning, we observed at least 20 adult seedeaters in the area, many of them singing. They moved in pairs and small flocks, and all possessed the same features described above. The yellow wash on the throat, especially visible on its lower part, was difficult to see on some individuals and did not appear obvious on our photographs, but when the birds were examined closely there was no doubt as to its presence. Such faintness of the yellow does not eliminate Yellow-throated Seedeater: Atkins & Harvey (1996) noted that the yellow can sometimes be difficult to see on Yellow-throated Seedeater and our own subsequent field observations from Melka Ghebdu (April 2012, February 2013, April 2013, April 2014) in Ethiopia revealed a wide range of intensity of yellow throat markings, from barely visible to very distinct.

Several individuals were photographed singing from treetop perches and feeding on the ground, and sound-recordings were made of their vocalisations, especially the song. These were compared aurally to recordings of Yellow-throated Seedeater made at Melka Ghebdu in Ethiopia, to which they sounded identical. Recordings of



Figures 1–3. Adult *Crithagra* seedeaters, Forêt du Day, Djibouti, 1–2 June 2010; the white chin, yellow throat, unstriated breast, relatively plain upperparts and extensive yellow rump are all visible (Callan Cohen & Michael Mills / www.birdingafrica.com)

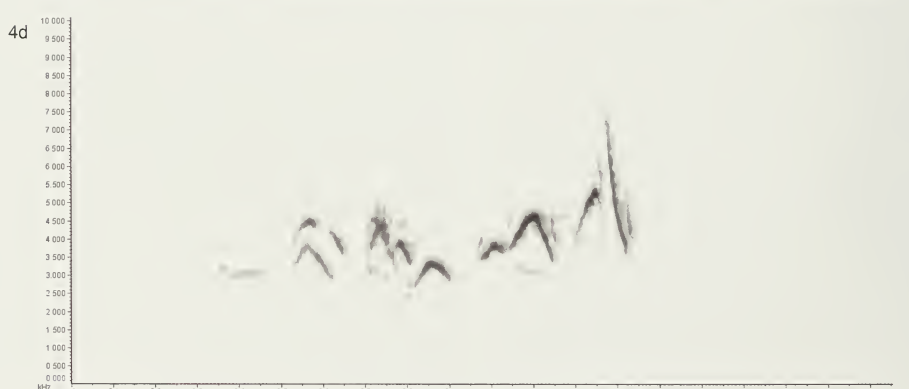
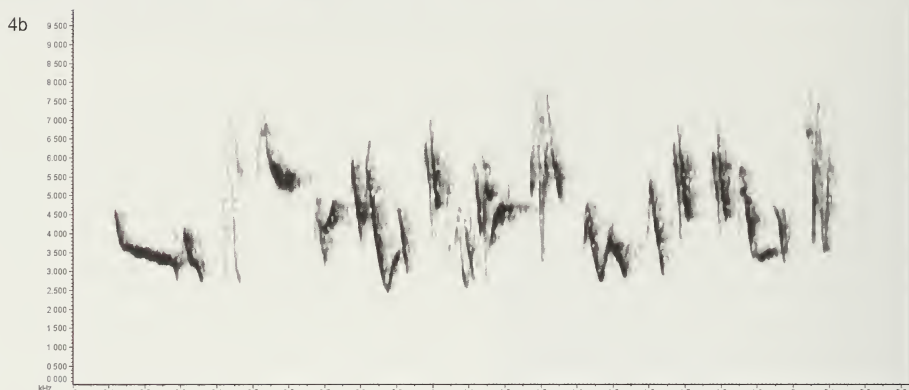
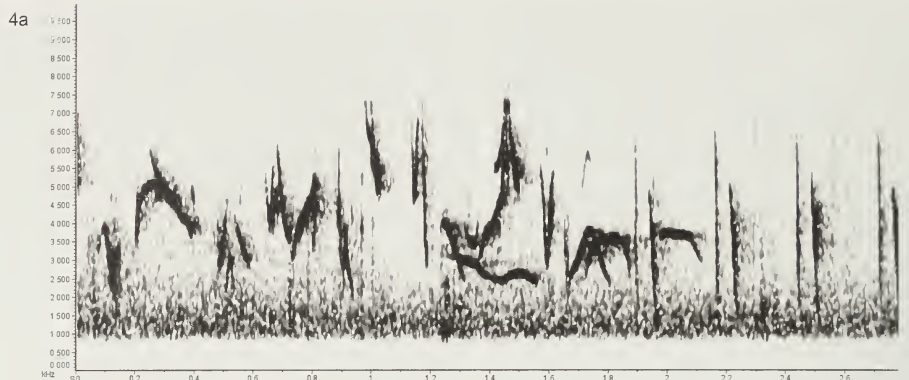
Serins *Crithagra* adultes, Forêt du Day, Djibouti, 1–2 juin 2010 ; le menton blanc, la gorge jaune, la poitrine non striée, les parties supérieures unies et le croupion jaune sont tous visibles (Callan Cohen & Michael Mills / www.birdingafrica.com)

White-throated Seedeater *C. xanthopygia* (also confusingly called Yellow-rumped Seedeater, a name sometimes applied to Reichenow's Seedeater) made subsequently in Ethiopia sound different, although may not represent birds in full song, so might not be directly comparable to our recordings of the Djibouti birds. Four of these recordings, demonstrating the similarities and differences, can be downloaded at www.birdsangola.org/downloads.htm. In order to further demonstrate the observed similarity between the song of the seedeaters in Forêt du

Day and those of Yellow-throated Seedeater from Melka Ghebdu, and differences from White-throated Seedeater recorded at Gibé Gorge and the Jemma Valley, we present sonograms of these recordings created using Raven Lite (Figs. 4a–d).

In addition, a single presumed juvenile that was with the adults was photographed. It lacked the yellow throat and had very heavy dark brown markings on the throat and breast (Fig. 5). Superficially it recalled Reichenow's Seedeater, although the malar stripe was much broader, the throat dark, and the supercilium faint and confined to a pale line just above the eye. The identity of this juvenile is uncertain; its association with the other seedeaters suggests it was of the same species, but M. Ottaviani (*in litt.* 2010) believes the heavy streaking indicates Reichenow's Seedeater.

Subsequently to our visit to Djibouti, N. Borrow visited Forêt du Day in September 2010 and reported White-throated Seedeater *C. xanthopygia* here (N. Borrow *in litt.* 2010). Some discussion followed, and photographs by M. Ottaviani suggested that, contrary to the available literature (Fry & Keith 2004, Redman *et al.* 2009), White-throated Seedeater can show some yellow on the throat and that almost all Yellow-throated Seedeaters have much more extensive yellow on the throat than shown by the Djibouti birds, with the yellow occasionally reaching onto the breast (M. Ottaviani *in litt.* 2010). Subsequently, in February 2011 CC was able to study, photograph and record the vocalisations of White-throated Seedeater in the Jemma Valley, Ethiopia, a locality within the known range of that species (Ash & Atkins 2009). His photographs revealed that



Figures 4 a–d. Sonograms of seedeater songs for comparison, with time(s) on the x-axis and frequency (kHz) on the y-axis. Sonograms are based on recordings of (a) Yellow-throated Seedeater *Crithagra flavigula* made by Michael Mills at Melka Ghebdu, Ethiopia, April 2014, (b) a seedeater *Crithagra* recorded by Michael Mills at Forêt du Day, Djibouti, June 2010, (c) White-throated Seedeater *C. xanthopygia* recorded by Michael Mills at Gibé Gorge, Ethiopia, April 2014, and (d) White-throated Seedeater recorded by Callan Cohen at the Jemma Valley, Ethiopia, February 2011. The song structure of Yellow-throated Seedeater and the Forêt du Day seedeaters is almost identical, but quite different from that observed in White-throated, although recordings of the latter may not represent full song and therefore not be directly comparable. The recordings used to create these sonograms can be downloaded at www.birdsangola.org/downloads.htm.

Sonogrammes de chants de serins pour comparaison, avec le temps sur l'axe x et la fréquence (kHz) sur l'axe y. Les sonogrammes sont basés sur les enregistrements suivants : (a) Serin à gorge jaune *Crithagra flavigula* enregistré par Michael Mills à Melka Ghebdu, Éthiopie, en avril 2014 ; (b) un serin *Crithagra* enregistré par Michael Mills à la Forêt du Day, Djibouti, en juin 2010 ; (c) Serin à croupion jaune *C. xanthopygia* enregistré par Michael Mills à Gibé Gorge, Éthiopie, en avril 2014 ; et (d) Serin à croupion jaune enregistré par Callan Cohen dans la vallée de Jemma, Éthiopie, en février 2011. La structure du chant du Serin à gorge jaune et celle des serins de la Forêt du Day est presque identique, mais bien différente de celle du Serin à croupion jaune, bien que les enregistrements de ce dernier peuvent ne pas représenter le chant complet et ne sont donc pas directement comparables. Les enregistrements utilisés pour produire ces sonogrammes peuvent être téléchargés sur www.birdsangola.org/downloads.htm.

a small amount of faint yellow was visible on the lower chins of all birds examined carefully (Figs. 6–7), like that displayed by the birds from Djibouti. In May 2013 MSLM examined the series of c.15 White-throated Seedeaters at the Natural History Museum, Tring, which showed no yellow on the throats of any of these specimens, although the colour could have faded.

In summary, the amount of yellow on the throat appears to be quite variable in both White-throated Seedeater (from none to a small amount) and Yellow-throated Seedeater (from almost invisible to clearly demarcated bright yellow spilling onto the breast). There may be a seasonal/plumage wear component to this variation, although individual variation is known for some congeners (G. M. Kirwan *in*



Figure 5. Presumed juvenile *Crithagra*, observed with the adults depicted in Figs. 1–3, Forêt du Day, Djibouti, 1 June 2010; the plumage is superficially similar to that of Reichenow's Seedeater *C. reichenowi*, but differs in having a dark throat, broader malar stripe and fainter supercilium (Callan Cohen & Michael Mills / www.birdingafrika.com)

Crithagra, présumé juvénile, observé avec les adultes des Figs. 1–3, Forêt du Day, Djibouti, 1er juin 2010 ; le plumage est superficiellement similaire à celui du Serin de Reichenow *C. reichenowi*, mais en diffère par la gorge sombre, le trait malaire plus large et le sourcil plus faible (Callan Cohen & Michael Mills / www.birdingafrika.com)

litt. 2015). The songs of these two taxa are also very similar, if not identical, and they frequent similar habitats and have abutting distributions. No other distinguishing characteristics have been documented in the literature during direct comparison of the two taxa, suggesting that these forms may be conspecific. It is our opinion that it is currently impossible to assign the Djibouti birds to one taxon or the other, and that furthermore the validity and taxonomic rank of the two taxa discussed require renewed investigation, preferably including a genetic comparison, and if proven to be different, their diagnostic features demand elucidation.

At present, White-throated Seedeater is known to occur widely throughout the western highlands of northern Ethiopia and Eritrea (Ash & Atkins 2009). Yellow-throated Seedeater, however, is poorly known and confined to altitudes of 1,300–1,600 m in Shoa province, central-east Ethiopia, although it is suspected to be more widespread (Fry & Keith 2004, Ash & Atkins 2009, Redman *et al.* 2009) with unpublished reports from



Figures 6–7. Adult White-throated Seedeaters *Crithagra xanthopygia*, Jemma Valley, Ethiopia, February 2011; a small patch of faint yellow is visible on the lower throat, a feature not mentioned in the literature (Callan Cohen / www.birdingafrica.com)

Serins à croupion jaune *Crithagra xanthopygia* adultes, vallée de Jemma, Éthiopie, février 2011 ; une petite tache jaune est à peine visible sur le bas de la gorge, une caractéristique qui n'est pas mentionnée dans la littérature (Callan Cohen / www.birdingafrica.com)

up to 350 km north of Melka Ghebdu (M. Gabremichael *in litt.* 2010). Interestingly, the distributions of these two taxa abut in Ethiopia, with records from the same atlas square (Ash & Atkins 2009). Reichenow's Seedeater also occurs widely in Ethiopia, at similar altitudes, but largely occurs to the south of the range of White-throated Seedeater. None of the three occurs close to the Djibouti border. Our sightings extend the known range of either species by at least 430 km and constitute a new species for the country. The presence of Reichenow's Seedeater in Djibouti now requires confirmation.

During our short visit to Forêt du Day, these seedeaters appeared to be locally common,

while the observation of a presumed juvenile suggests that they breed there. On 2–3 June 2010, more *Crithagra* seedeaters were heard at Dittilou (11°46'52"N 42°41'36"E), on the south-eastern edge of Forêt du Day, although they were not seen, so we cannot be certain that they were not Reichenow's Seedeater. More recently, the same seedeaters were again seen in the Forêt du Day (N. J. Redman pers. comm.) and were identified as White-throated Seedeaters. Future visitors to Djibouti should pay close attention to seedeaters with yellow rumps, to confirm their range and status, and to establish whether any other species of *Crithagra* might occur in the country.

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Percy FitzPatrick Institute of African Ornithology, DST/NRF Centre of Excellence, University of Cape Town, Private Bag X3, Rondebosch 7701, South Africa. E-mails: michael@birdingafrica.com and callan@birdingafrica.com

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